

1. (Amended) An *in vivo* process for delivering [a polynucleotide] polynucleotides to [a parenchymal cell] skeletal muscle cells in a mammal, comprising:
  - a) inserting [the polynucleotide] an injector into a limb blood vessel of the mammal;
  - b) [externally impeding in vivo] applying device external to mammalian skin for occluding blood vessels [flow] in the limb; and,
  - c) injecting a solution containing the polynucleotides into the lumen of the vessel distal to the occlusion thereby delivering the [polynucleotide] polynucleotides to [the parenchymal cell] skeletal muscle cells in the limb.
6. (Amended) The process of claim [5] 1 wherein the muscle cell consists of a leg muscle cell.
7. (Amended) The process of claim [5] 1 wherein the muscle cell consists of an arm muscle cell.
11. (Amended) The process of claim 9 wherein the muscle cell is selected from the group consisting of palmaris longus, pronator teres, flexor carpi radialis, flexor carpi ulnaris, and flexor digitorum [spf] superficialis.
12. (Amended) The process of claim [10] 8 wherein the anterior muscle cell is selected from the group consisting of flexor digitorum [prof] profundus, and pronator quadratus.
17. The process of claim [15] 13 wherein the posterior muscle cell is selected from the group consisting of supinator, abductor pollicis longus, extensor digiti secund et tertii, and extensor digiti quart et minimi.
25. The process of claim [23] 21 wherein the [deep] posterior muscle cell is selected from the group consisting of popliteus, flexor digitorum longus, flexor hallucis longus, and tibialis posterior.
30. The process of claim [27] 6 wherein the [internal] leg muscle cell is selected from the group consisting of peroneus longus and peroneus brevis.
33. (Amended) The process of claim [32] 1 wherein [externally applying pressure] occluding blood vessels consists of compressing mammalian skin.
39. (Amended) An *in vivo* process for delivering [a polynucleotide to a mammalian cell] polynucleotides to skeletal muscle cells in a mammal, comprising:
  - a) inserting [the polynucleotide] an injector into a limb blood vessel of the mammal and applying pressure to the blood vessel wherein the pressure is applied [externally] by a device external to mammalian skin;
  - b) [delivering the polynucleotide to the mammalian cell] injecting a solution containing the polynucleotides into the lumen of the vessel thereby delivering the polynucleotides to skeletal muscle cells in the limb; and,
  - c) maintaining [full] function of the [mammal's limbs] limb wherein function is not affected by the delivery process.

A clean version of each replacement claim is submitted below. Please enter each claim.

1. (Amended) An *in vivo* process for delivering polynucleotides to skeletal muscle cells in a mammal, comprising:
- inserting an injector into a limb blood vessel of the mammal;
  - applying a device external to mammalian skin for occluding blood vessels in the limb; and,
  - injecting a solution containing the polynucleotides into the lumen of the vessel distal to the occlusion thereby delivering the polynucleotides to skeletal muscle cells in the limb.
6. (Amended) The process of claim 1 wherein the muscle cell consists of a leg muscle cell.
7. (Amended) The process of claim 1 wherein the muscle cell consists of an arm muscle cell.
11. (Amended) The process of claim 9 wherein the muscle cell is selected from the group consisting of palmaris longus, pronator teres, flexor carpi radialis, flexor carpi ulnaris, and flexor digitorum superficialis.
12. (Amended) The process of claim 8 wherein the muscle cell is selected from the group consisting of flexor digitorum profundus, and pronator quadratus.
17. The process of claim 13 wherein the posterior muscle cell is selected from the group consisting of supinator, abductor pollicis longus, extensor digiti secund et tertii, and extensor digiti quart et minimi.
25. The process of claim 21 wherein the posterior muscle cell is selected from the group consisting of popliteus, flexor digitorum longus, flexor hallucis longus, and tibialis posterior.
30. The process of claim 6 wherein the leg muscle cell is selected from the group consisting of peroneus longus and peroneus brevis.
33. (Amended) The process of claim 1 wherein occluding blood vessels consists of compressing mammalian skin.
39. (Amended) An *in vivo* process for delivering polynucleotides to skeletal muscle cells in a mammal, comprising:
- inserting an injector into a limb blood vessel of the mammal and applying pressure to the blood vessel wherein the pressure is applied by a device external to mammalian skin;
  - injecting a solution containing the polynucleotides into the lumen of the vessel thereby delivering the polynucleotides to skeletal muscle cells in the limb; and,
  - maintaining function of the limb wherein function is not affected by the delivery process.